

ABSTRACT OF THE DISCLOSURE

An integrated optical device comprises a vertically lasing semiconductor optical amplifier (VLSOA) and an optical element integrated onto a common substrate. Example optical elements include waveguides, unguided transparent regions, and active optical devices (including additional VLSOAs). The integrated device may be fabricated using a number of different methods, including based on selective area epitaxy, impurity induced disordering, etch and fill and silicon optical bench.